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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/761,424	01/22/2004	William J. Carroll	000309-00053	1421
27557	7590	08/23/2006	EXAMINER	
BLANK ROME LLP 600 NEW HAMPSHIRE AVENUE, N.W. WASHINGTON, DC 20037			FAULCON JR, LENWOOD	
			ART UNIT	PAPER NUMBER
			3762	

DATE MAILED: 08/23/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.		Applicant(s)	
	10/761,424		CARROLL ET AL.	
	Examiner		Art Unit	
	Lenwood Faulcon, Jr.		3762	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 08 June 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-42 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-42 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on June 8, 2006, has been entered.

Response to Arguments

2. Applicant's arguments with respect to claims 1-42 have been considered but are moot in view of the new ground(s) of rejection.

Claim Rejections - 35 USC § 103

3. Claims 1-42 are rejected under 35 U.S.C. 103(a) as being unpatentable over Carter et al. (U.S. 2001/0031999).

In regards to claims 1, the Carter et al. (hereinafter Carter) reference teaches of an electrical stimulator for the treatment of pain (see for example paragraphs 2, 57, 58, Figure 2), comprising an interferential current generator that is capable of generating interferential alternating current output (see for example paragraphs 12 and 13), by using common sine wave generators (see for example paragraphs 63 and 77, and Figure 8), with a base frequency of at least 1 KHz (see for example paragraph 12).

Further in regards to claims 1, Carter teaches of the use of multiple/pair of implantable electrodes (see for example paragraph 77 and Figure 8), that are capable of being positioned at locations proximate to a patient's spinal cord and other locations (see for example paragraphs 36, 38, 41, 53 and 58); however, Carter does not specifically disclose the use of at least two pair of electrodes. Examiner takes the position that it would have been obvious to one having ordinary skill in the art at the time of the invention to modify the system as taught by Carter to include at least two pair of implantable electrodes, since it is well in the art that such a configuration is well known to provide efficient and effective stimulation.

In regards to claims 2, Examiner takes the position that the Carter reference teaches of a pulse generator that generates digital signal pulses and the use of a digital signal processor (see for example paragraphs 63 and 75). Or in the alternative, Examiner take the position that it would have been obvious to one having ordinary skill in the art at the time of the invention to modify the system as taught by Carter to include a pulse generator that generates digital signal pulses and a digital signal processor, since these components are well known in the art to provide efficient and effective stimulation.

In regards to claim 3, Carter teaches of the use of pulse generator that generates digital signals (see for example paragraphs 63 and 75). Or in the alternative, similar to claim 2, Examiner takes the position that it would have been obvious to one having ordinary skill in the art at the time of the invention to modify the system as taught by Carter to include a pulse generator that generates digital signals, since it is well known

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in the art that digital signals can be used to provide efficient and effective stimulation. Further, Carter does not specifically teach of the use of a field-programmable gate array; however, Examiner takes the position that the use of field-programmable gate arrays are well known in the art and it would have been obvious to one having ordinary skill in the art at the time of the invention to modify the system as taught by Carter to include a field programmable gate array, since field programmable gate arrays are known in the art to enhance digital signals.

In regards to claim 4, Carter teaches of the use of a beat frequency that does not exceed 250 Hz (see for example paragraph 36).

In regards to claim 5-7, Carter does not specifically teach of the exact limitations as claimed in claims 5-7; however, Examiner takes the position as taught by Carter is inherently capable of such limitations (see for example paragraphs 77-79). Further, Examiner takes the position it would have been obvious to one having ordinary skill in the art at the time of the invention to modify the system as taught by Carter to include the limitations of claim 5 to ensure safe, effective and efficient treatment to a patient.

In regards to claim 8, Carter does not specifically teach of the use of two quadripolar lead; however, Examiner takes the position that the use of quadripolar leads are well known in the art and it would have been obvious to one having ordinary skill in the art to modify the system as taught by Carter to include quadripolar leads, since quadripolar are well known in the art to provide effective and efficient stimulation.

In regards to claims 9-10, 12-13, 15-17, 23-24, 26-27, 29-30, 37-38, these claims present similar limitations as to claims 1-3 and are thus rejected for similar reasons.

In regards to claims 11, 13, 18, 25, 28, 32, 40, these claims present similar limitations as to claim 4, and are thus rejected for similar reasons.

In regards to claim 19-22, 33-36, 41-42, these claims present similar limitations as to claims 5-8, are thus rejected for similar reasons.

In regards to claims 31 and 39, Carter teaches that the system is capable of amplitude modulation (see for example paragraph 77).

Conclusion

4. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Hansjurgens et al. (U.S. Patent No. 4,598,713), Hall (U.S. Patent No. 4,848,347), Thomas (U.S. Patent No. 5,107,835), Terry et al. (U.S. Patent No. 5,215,086), Matthews (U.S. Patent No. 5,269,304), Madsen et al. (U.S. Patent No. 5,776,173).

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Lenwood Faulcon, Jr. whose telephone number is 571-272-6090. The examiner can normally be reached on Monday-Thursday from 9 to 5 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Angela D. Sykes, can be reached on 571-272-4955. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR.

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Status information for unpublished applications is available through Private PAIR only.

For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should

you have questions on access to the Private PAIR system, contact the Electronic

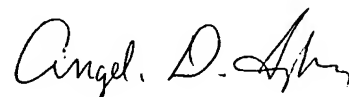
Business Center (EBC) at 866-217-9197 (toll-free).



Lenwood Faulcon, Jr.

George Manuel

Primary Examiner



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